

IN THE CLAIMS:

1. (Cancelled)
2. (Currently amended) An isolated and purified DNA molecule that hybridizes to the DNA sequence shown in SEQ ID 1 under high stringency hybridization conditions wherein said conditions comprise washing in 1% SDS, 20mM phosphate buffer and 1mM EDTA at 65°C following hybridization and wherein a polypeptide or protein encoded by said DNA molecule comprises at least one heme binding site or one zinc finger domain.
3. (Original) An isolated and purified DNA sequence that consists essentially of the DNA sequence shown in SEQ ID 1.
4. (Previously presented) A recombinant DNA molecule comprising the isolated and purified DNA sequence of Claim 2 or 3 subcloned into an extra-chromosomal vector.
- D₃ 5. (Previously presented) A recombinant host cell transfected with the recombinant DNA molecule of Claim 4.
6. (Original) A recombinant host cell deposited with the ATCC under accession number 98402.
7. (Cancelled)
8. (Currently amended) An isolated and purified DNA molecule that hybridizes to the DNA sequence shown in SEQ ID 3 under high stringency hybridization conditions wherein said conditions comprise washing in 1% SDS, 20mM phosphate buffer and 1mM EDTA at 65°C following hybridization and wherein a polypeptide or protein encoded by said DNA molecule comprises at least one heme binding site or one zinc finger domain.

9. (Original) An isolated and purified DNA sequence that consists essentially of the DNA sequence shown in SEQ ID 3.

10. (Previously presented) A recombinant DNA molecule comprising the isolated and purified DNA sequence of Claim 8 or 9 subcloned into an extra-chromosomal vector.

11. (Previously presented) A recombinant host cell transfected with the recombinant DNA molecule of Claim 10.

12. (Original) A recombinant host cell deposited with the ATCC under accession number 98403.

13. (Original) A recombinant host cell deposited with the ATCC under accession number 98404.

14. (Original) A recombinant host cell deposited with the ATCC under accession number 98405.

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15. (Original) An isolated and purified DNA sequence selected from the group consisting of SEQ ID 11, SEQ ID 13, SEQ ID 21, SEQ ID 23, SEQ ID 25, SEQ ID 27, SEQ ID 29, SEQ ID 31, SEQ ID 33, SEQ ID 35, SEQ ID 37, SEQ ID 39, SEQ ID 41, SEQ ID 43, SEQ ID 45, SEQ ID 47, and SEQ ID 49.

16. (Original) A recombinant DNA molecule comprising an isolated and purified DNA sequence of Claim 15, subcloned into an extra-chromosomal vector.

17. (Previously presented) A recombinant host cell transfected with a recombinant DNA molecule of Claim 16.

18-24. (Cancelled)

25. (Currently amended) A diagnostic assay for identifying cancer cells, ~~for~~ by detecting cells containing mutations in a gene encoding a redox-sensitive protein that protects cells from apoptosis, comprising isolating total genomic DNA from the cell and subjecting the genomic DNA to PCR amplification using primers having a sequence comprised by the DNA sequence of Claim 2, 3, 8, 9, or 15, and determining whether the resulting PCR product contains a mutation.

26. (Currently amended) A diagnostic assay for identifying cancer cells, ~~for~~ by detecting cells containing mutations in a gene encoding a redox-sensitive protein that protects cells from apoptosis, comprising isolating total cell RNA, subjecting the RNA to reverse transcription-PCR amplification using primers having a sequence comprised by the DNA sequence of Claim 2, 3, 8, 9, or 15 and determining whether the resulting PCR product contains a mutation.

27-31. (Cancelled)

32. (Previously presented) A method for purifying a protein from bacterial cells comprising:

D3 (a) transfecting a bacterial host cell with a vector comprising the isolated and purified DNA sequence of Claim 2, 3, 8, 9, or 15 operatively linked to a promoter capable of directing gene expression in a bacterial host cell;

(b) inducing expression of the isolated and purified DNA sequence in the bacterial cells;

(c) lysing the bacterial cells;

(d) isolating bacterial inclusion bodies; and

(e) purifying from the isolated inclusion bodies a protein having an amino acid sequences encoded by said DNA sequence.

33-37. (Cancelled)

38. (Previously presented) An isolated and purified DNA sequence encoding a polypeptide having the amino acid sequence selected from the group consisting of SEQ ID 12, SEQ ID 14, SEQ ID 22, SEQ ID 24, SEQ ID 26, SEQ ID 28, SEQ ID 30, SEQ ID 32, SEQ ID 34, SEQ ID 36, SEQ ID 38, SEQ ID 40, SEQ ID 42, SEQ ID 44, SEQ ID 46, SEQ ID 48, and SEQ ID 50.

39. (Currently amended) The DNA molecule of claim 2, wherein said molecule encodes a polypeptide that protects a cell from apoptosis when produced in said cell and wherein said polypeptide comprises at least one zinc finger domain.

40. (Currently amended) The DNA molecule of claim 2, wherein said molecule encodes a polypeptide that protects against lipid peroxidation and wherein said polypeptide comprises at least one heme binding site.

41. (New) A method for inhibiting tumor growth, comprising introducing into said tumor cells an expression vector comprising an isolated and purified DNA molecule of any one of Claims 2, 3, 8, 9, or 15, which is operatively linked to a DNA molecule that promotes high level expression of the antisense strand of said isolated and purified DNA molecule in said tumor cells.

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cont
42. (New) An isolated and purified DNA molecule that hybridizes to the DNA sequence shown in SEQ ID 1 under high stringency hybridization conditions wherein said conditions comprise washing in 1% SDS, 20mM phosphate buffer and 1mM EDTA at 65°C following hybridization and wherein a polypeptide or protein encoded by said DNA molecule comprises at least one heme binding site and one zinc finger domain.
